CHANGE THE WORLD, START WITH ENERGY STAR®

Tips for Producing Interactive Displays

Incorporating educational, interactive elements into your event can significantly enhance your event or display. Not only do these displays help attract a crowd, they also reinforce the importance of energy efficiency messages through a sensory experience. Depending on your location, type of organization, and resources, you may be able to borrow a display, create a permanent interactive display, or purchase a pre-made display.

Where do I start?
Some organizations have interactive displays available for loan if you do not have your own displays. If you're interested in incorporating interactive displays in a low-cost manner, start by reaching out to companies or organizations that educate people on energy efficiency. Below are a few tips on where to start.

- **Reach out to local energy efficiency programs.** Many local utilities or energy efficiency program sponsors have interactive displays that they use as teaching tools, and make available for loan. Ask about displays, such as compact fluorescent light bulb (CFL) displays, CFL comparators (manual generators that compare energy use of CFLs to incandescent lights), watt meters that you can attach to electronics, etc.

- **Reach out to local lighting or electronics stores or manufacturers.** Many retail stores and manufacturers develop mobile, interactive displays that they use as selling tools. If one of these companies is invested in supporting the community, or particularly if your organization serves the same community in which the company operates (if your organization is a school, local government office, or non-profit organization), you may find that company representatives are willing to help.

- **Use ENERGY STAR online interactive tools.** Display some of the free online interactive tools that EPA offers. All you need is Internet access and a laptop or desktop computer for demonstration purposes. Choose from the ENERGY STAR @ home interactive house, @ work interactive office space, kids' page, programmable thermostat tool, video podcasts, and more. Check the ENERGY STAR Resource List in the event toolkit for a list of online interactive tools and resources.

What about permanent interactive display options?
Creating more permanent displays allows your organization to incorporate interactive and educational fun into multiple events, now and in the future. Consider building your own interactive displays. Below are some examples of common interactive displays that have a strong energy efficiency message.

Feature CFLs in Different Shapes and Sizes

Two common misconceptions about an ENERGY STAR qualified CFL is that it only comes as a "spiral-shaped" bulb and it is too bright compared to an incandescent light bulb. The fact is, ENERGY STAR qualified CFLs come in various shapes and sizes and in varied light spectrums. Create the following displays to show your audience the difference.

- Purchase a four or five light socket fixture or floor lamp for your display.
  - If you want to highlight the different shapes and sizes of a CFL bulb, fill the fixture with different visual examples. Recommended: Spiral, Globe, Indoor Reflector, Candle, and a Mini Spiral.
  - CFLs are available in a wide variety of shades of light, ranging from soft white or yellowish to white and bluish white light. Highlight the different CFL color outputs by showcasing CFL spiral-shaped bulbs in different shades. For the display, purchase a "soft white" (or 2700-3000K), a "bright white" (or 3500-4100K), and a "daylight" (or 5000-6000K) light bulb. Also purchase regular incandescent bulbs at comparable wattages so visitors can see a color comparison.
  - Helpful hint: Purchase 2 or 3 of each bulb in case some get damaged during the life of the demonstration. And, always screw and unscrew the light bulb by its base (not the glass), and never forcefully twist the CFL into a light socket.
- To help visitors at your display better understand the information, create accompanying labels and signs for each bulb. Some possible messages for signs include:
  - An ENERGY STAR qualified CFL will save more than $40 over its lifetime. ENERGY STAR qualified CFLs use 75 percent less energy and last 10 to 50 times longer than an incandescent bulb.
  - CFLs have come a long way in the last 20 years. Today's ENERGY STAR qualified CFLs use advanced technology; are small; are quick to light up; produce high-quality light; and are available in a variety of sizes, shapes, and colors. Some even work on dimmers or three-way switches.
  - Light color is measured on a temperature scale referred to as Kelvin (K).
    - Lower Kelvin numbers mean the light appears more yellow; higher Kelvin numbers mean the light is whiter or bluer.
  - Most ENERGY STAR qualified bulbs are made to match the color of incandescent bulbs at 2700-3000K.
    - For a whiter light, good for kitchens and work spaces, look for bulbs marked 3500-4100K.
    - For bluer white light, closer to the appearance of daylight, look for bulbs marked 5000-6500K.

(Print and copy this FAQ document for visitors with questions about mercury contained in CFL bulbs.)

You can also promote ENERGY STAR qualified light fixtures, screw-in replacement bulbs, and decorative light strings that use light emitting diodes (LEDs). ENERGY STAR qualified LED lights consume 75% less energy than conventional incandescent lights.

Feature Watt Meters

Another fun, educational low-cost display option is to purchase a watt meter to show a product's energy use—or purchase two watt meters to display side-by-side, comparing the energy use of similar products. Here are some ways to educate people about energy use with interactive watt meter displays.

- **Compare an ENERGY STAR qualified decorative [holiday] light string to a regular incandescent light string.**
  - Message point: Decorate your home with ENERGY STAR qualified decorative light strings, most of which feature light emitting diode (LED) technology. An ENERGY STAR qualified decorative light string uses 70 percent less energy than an incandescent light string.

- **Compare an ENERGY STAR qualified desk lamp (or lamp with an ENERGY STAR qualified CFL) and a desk lamp with an incandescent light bulb.**
  - Message point: ENERGY STAR qualified bulbs and fixtures uses about 75 percent less energy and lasts 10 to 50 times longer than an incandescent bulb.

- **Plug an ENERGY STAR TV into the Watt Meter and navigate through different screen settings. You'll notice that power consumption changes with each screen setting.**
  - Message point: Televisions are now manufactured with multiple screen settings and options that can affect power consumption. Check the settings on your television by going to the set-up menu. Look for the "home" or "standard" setting which uses less energy. In addition, taking advantage of your TV's other power saving options, like automatic brightness control or local dimming, can save you even more.

- **Plug an ENERGY STAR qualified computer into the watt meter and demonstrate power management. Click here for more information on how to demo power management and choose your operating system. Visitors will notice the drop in the computer's energy use.**
  - Message point: ENERGY STAR Power Management features—standard in Windows and Macintosh operating systems—place monitors and computers (CPU, hard drive, etc.) into a low-power "sleep mode" after 5 to 20 minutes of inactivity. Touching the mouse or keyboard "wakes" the computer and monitor in seconds. The lower the setting, the more energy you save.

Where Should I Look for Pre-Made Interactive Displays?

If you are looking to invest in pre-made, interactive displays, the following organizations offer energy efficiency educational displays.

- **Windstream Power LLC** (www.windstreampower.com) – This alternative energy company focused on energy education, human power, and transforming movement into electricity offers a variety of educational displays, including:

    - *Bike Power Generator* – Visitors pedal the bicycle to feel the difference in generating energy to light up an ENERGY STAR qualified CFL versus an incandescent light bulb. After purchasing the generator and corresponding light box, don't forget to purchase an adult bike. For maximum results, the back wheel should be at least 26" with a road tire (i.e., a tire with no tread).

    - *Human Power Generator* – User-friendly and portable, visitors hand-turn the crank to feel the difference in generating energy to light an ENERGY STAR qualified CFL bulb versus an incandescent light bulb.

- **Pedal Power Generator** (www.pedalpowergenerator.com) – This alternative energy company builds displays and provides instructional videos for building your own educational displays, including:

    - *Bike Power Generator* – Same information as above.

    - *Human Power Generator* – Same information as above.

    - *Interactive Lighting Displays* – Portable and eye catching, these displays teach visitors about the difference between CFL bulbs and incandescent light bulbs. Some of the displays incorporate LED technology. Options include a 2-Way CFL Interactive Display, a 3-Way DC to AC CFL Interactive Display, a 4-Way Interactive CFL Display, or a 12-Way Interactive Display.

    - If you're handy and willing to make your own generator display, Pedal Power Generator provides free videos, plans, and a parts list on its website.

- **The Pedal Power by A1 Cable Solutions, Inc** (www.thepedalpower.com) – An alternative energy company focused on energy education. A1 Cable Solutions, Inc offers a variety of displays, including:

    - *Bike Power Generator* – The Pedal Power uses a bicycle-powered generator to power lights (LED, CFLs, and incandescent) and various appliances (a fan, radio, and a hair dryer) that can be plugged into the display board to provide electrical load. As more things are turned on it becomes harder for the person pedaling the bicycle to provide power to the display. The person pedaling the bicycle and the audience get the chance to see firsthand what it's like to be a power plant when too many things get turned on. Additionally, voltage and current meters on the display board allow you to calculate the power (in watts) needed to run the different types of lights to compare incandescent and fluorescent lamps or other types of appliances.